

FUJR 10.74R (100794-09745)
09/886,268REMARKS

This amendment is in response to the Examiner's Office Action dated 4/5/2005. Reconsideration of this application is respectfully requested in view of the foregoing amendment and the remarks that follow. Claims 1, 8, and 9 have been amended without adding new matter. Support for the amended claims can be found on page 4, lines 2-5, page 9, line 2-4, and page 25, line 24 through page 26, line 3.

STATUS OF CLAIMS

Claims 1-14 are pending.

Claims 10-14 are withdrawn from consideration.

Claims 1-3, 8, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bleickardt et al. (USP 5461622) in view of Takatsu et al. (EP 0939509 A2).

Claims 4-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bleickardt in view of Takatsu, further in view of Cioffi et al (USP 6473438).

OVERVIEW OF CLAIMED INVENTION

The presently claimed invention provides for a transmission system for controlling the transmission of a concatenation signal via a path, wherein the system comprises a sending apparatus and a receiving apparatus. The sending apparatus comprises a signal dividing means for dividing the concatenation signal to generate a plurality of divided signals which are pseudo concatenation signals having a SONET or SDH multiplexed interface, the bit rate of which is lower than that of the original concatenation signal, according to a bit rate available for a transmission line, wherein a respective bit rate of one of the divided signals differs from that of

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another of the divided signals; a guarantee information adding means for adding guarantee information, for guaranteeing the continuity of the divided signals, to each of the divided signals to generate transmission signals; and a signal sending means for sending the transmission signals to one address, in parallel via a plurality of transmission on which the bit rate is limited. The receiving apparatus comprises a signal receiving means for receiving the transmission signals; and signal restoring means for restoring the original concatenation signal by constructing the divided signals on the basis of the guarantee information.

REFLECTIONS UNDER 35 U.S.C. § 103(a)

Claims 1-3, 8, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bleickardt et al. (USP 5,461,622) in view of Takatsu et al. (EP 0939509 A2). Claims 4-7 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bleickardt in view of Takatsu, further in view of Cioffi et al (USP 6,473,438). To be properly rejected under 35 U.S.C. § 103(a), each and every element of the claims must be addressed through known prior art or be recognized as an obvious variation thereof. Applicant contends that the above-mentioned combinations of the Bleickardt et al., Takatsu et al., and Cioffi et al. references fail to provide many of the limitations of applicant's pending claims.

Bleickardt et al. provides for a method and apparatus for using SONET overhead to align multiple inverse multiplexed data streams. According to Bleickardt et al., existing SONET overhead is used to provide the information that enables multiple SONET data streams to be properly recombined at the receiving end of an inverse multiplexed super-rate data signal. In particular, the A1 and A2 framing bytes together with the H1 and H2 pointer bytes are used to realign the multiple component data streams. The A1 and A2 SONET framing bytes are first used

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to align the frames in the multiple data streams and then, once frame aligned, the H1 and H2 pointer bytes are used to align the SPEs within the multiple data streams. If the frame misalignment is known to be greater than one frame, then the content of the J1 byte, which repeats a specific pattern with a 64 frame period, is used to realign the frames in the component signals for up to a 64 frame misalignment.

Takatsu et al. provide for an optical transmission system that includes a multiplexer that multiplexes a plurality of optical signals that have different wavelengths onto an optical fiber. Takatsu et al. also teach a control signal (for identifying the number of optical signals to be carried over the optical fiber) is transmitted over the optical fiber by a transmitter, wherein the control signal carries information about the transmission rate and transmission state of each of the different wavelengths, and control information for changing the number of the plurality of optical signals.

Cioffi et al. provides for a number of bi-directional data transmission systems that facilitate communications between a plurality of remote units and a central unit using a frame based discrete multi-carrier transmission scheme are disclosed. In each of Cioffi et al.'s systems, frames transmitted from the plurality of remote units are synchronized at the central unit.

On page 3 of the office action of 04/05/2005, the examiner equates element 218 of the Bleickardt et al. reference as teaching the "signal sending means" limitation of independent claims 1 and 8. Elements 218-1 through 218-3 of figure 2 of the Bleickardt reference merely represent a "retiming and parallel-to-serial (P/S) circuits" (see column 5, lines 58-60 of Bleickardt et al.).

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In stark contrast, the signal sending means as described in independent claims 1 and 8 (as amended) teaches the limitation of sending the transmission signals to one address, in parallel via a plurality of transmission lines on which the bit rate is limited. Applicants respectfully submit that the "retiming and parallel-to-serial (P/S) circuits" of Bleickardt et al. fail to teach or suggest a signal sending means that sends the transmission signals to one address, in parallel via a plurality of transmission lines on which the bit rate is limited.

Although the examiner has relied on the Bleickardt et al. reference for rejecting the "signal sending means" limitation of claims 1 and 8, applicants wish to note that the "signal sending means" limitation is also neither suggested nor provided for by the secondary reference, Takatsu et al.

The above-mentioned arguments with respect to independent claim 1 substantially apply to dependent claims 2-7 as they inherit all the limitations of the claim from which they depend (i.e., claim 1).

Hence, the examiner is hereby respectfully requested to withdraw the rejections with respect to pending claims 1-8.

With respect to claim 9, on page 3 of the office action of office action of 04/05/2005, the examiner contends that the combination of elements 504 through 508 teaches the "signal receiving means" limitation of independent claim 9. Elements 504-1 through 504-3 corresponds to "timing extractors"; elements 505-1 through 505-3 represent "serial-to-parallel (S/P)

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converters"; elements 506-1 through 506-3 correspond to transport overhead or "TOH extractors" and path overhead or "POH extractors"; element 507-1 through 507-3 corresponds to an "evaluator"; and elements 508-1 through 508-3 represents "buffers".

By stark contrast, the signal receiving means as described in independent claim 9 teaches the limitation of signal receiving means for receiving transmission signals consisting of divided signals generated by dividing the concatenation signal, being sent to one address, in parallel via a plurality of transmission lines on which the bit rate is limited, wherein the divided signals are pseudo concatenation signals having a SONET or SDH multiplexed interface the bit rate of which is lower than that of the original concatenation signal and generated according to a bit rate available for a transmission line, wherein a respective bit rate of one of the divided signals differs from that of another of the divided signals.

Applicants respectfully contend that the combination of timing extractors, serial-to-parallel (S/P) converters, TOH extractors, POH extractors, evaluators, and buffers, as shown in figure 5 of the Bleickardt et al. reference does not teach or suggest a signal receiving means that receives transmission signals being sent to one address, in parallel via a plurality of transmission lines on which the bit rate is limited.

Although the examiner has relied on the Bleickardt et al. reference for rejecting the "signal receiving means" limitation of claim 9, applicants wish to note that the "signal receiving means" limitation is also neither suggested nor provided for by the secondary reference, Takatsu et al.

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Hence, the examiner is hereby respectfully requested to withdraw the rejections with respect to pending claim 9.

SUMMARY

As has been detailed above, none of the references, cited or applied, provide for the specific claimed details of applicant's presently claimed invention, nor renders them obvious. It is believed that this case is in condition for allowance and reconsideration thereof and early issuance is respectfully requested.

This amendment is being filed with a petition for extension of time. The Commissioner is hereby authorized to charge the petition fee, as well as any deficiencies in the fees provided to Deposit Account No. 50-1290.

If it is felt that an interview would expedite prosecution of this application, please do not hesitate to contact applicant's representative at the below number.

Respectfully submitted,



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